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The Confederated Tribes of the Colville Reservation



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November 14, 2006

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RE: CCT Comments on RAO's

Kevin and Sally:

The following are comments submitted by the Confederated Tribes of the Colville Reservation (CCT) on the draft technical memorandum on remedial action objectives prepared by Teck Cominco, which is entitled *Technical Memorandum No. 1: Preliminary Ecological Risk Management-Based Action Objectives*. In general, the memorandum employs non-standard language that is subject to varying interpretations, which can lead to unpredictable and undesirable results. The CCT therefore requests that Teck Cominco be required to utilize standard EPA language in this and all subsequent documents prepared regarding the Upper Columbia River Site. The comments below more specifically detail modifications requested by the CCT.

Comments

1. Problematic Shifts in Terminology

The objective of the draft technical memorandum is to establish preliminary remedial action objectives (RAOs) as in the National Contingency Plan (NCP). The settlement agreement defines Teck Cominco's term "risk management-based action objectives" (RMAOs) to be preliminary remedial action objectives (RAOs), as that term is used in the NCP. That said, a shift from terms used in EPA Guidance and the NCP is evident in the specific language of the document, and the CCT requests that these shifts be corrected.

For example, the document emphasizes "risk management" and "risk-based" screening approaches; this language is a subtle but clear alteration of the terms used in EPA Guidance and those that EPA has used consistently for many years in relation to RAOs and risk assessment. Where EPA would use the words "remedial action," Teck Cominco substitutes "risk-management" goals, alternatives, etc. These terms should be changed back to the original ones commonly used by EPA.

There are other shifts. For example, the draft technical memorandum states:

The RI/FS process will supplement information collected in prior studies to further delineate the nature and extent of contaminants present at the Site; provide an understanding of the sources, fate, and transport of

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contaminants to and within the Site; and *support risk-based assessment of potential exposures* by ecological receptors to Site-related contaminants.

Page 1, Paragraph 2 (Emphasis added).

The reference to "risk-based assessment" is not a term that has been previously used by EPA. "Risk-based assessment" is not equal to "risk assessment." A "risk-based assessment" cannot be performed without site characterization and also until a traditional "risk assessment" is completed. CCT seeks removal of this term and to clarify remedial goals and to be sure that a full ERA is completed for this site.

To summarize:

- All instances of the term "risk-management [objectives, goals, alternatives, etc.]" should be changed to "remedial action [objectives, goals, alternatives, etc.]."
- All instances of the term "risk-based assessment" should be changed to "risk assessment."

2. Goal of the CERCLA Process/RAOs is Protection of Human Health and the Environment

The overarching goal of the CERCLA and RAO process is to protect human health and the environment. Yet Teck Cominco has made subtle shifts in this goal as seen in statements made in the memo. For instance:

The guiding principle for defining preliminary ecological RMAOs for the Site is to use sound science in assessing potential ecological risks to better define risk management alternatives that will result in healthy and sustainable ecological populations within the Site ecosystem. At this early stage of the process, preliminary RMAOs for the protection of ecological receptors serve as a framework for the overall site assessment and ecological risk assessment (ERA).

Page 1, Paragraph 3.

The overall goal of the preliminary ecological RMAOs for the Site is to manage ecological risks to levels that will result in the recovery and maintenance of healthy local populations and communities of biota. Accordingly, the phrase "reduce to acceptable levels the risks" used in the preliminary ecological RMAOs summarized in Table 1 refers to decreasing the unacceptable risks associated with the presence of COCs at the Site by means that are appropriate to the circumstances present, and may include but not necessarily be limited to lowering/mitigating their concentrations, mobility, bioavailability, toxicity, and/or exposure to receptors. Similarly, "acceptable levels" refers to risks posed by COCs that are less than unacceptable adverse risk or harm to identified ecological receptors at the Site. Thus, reference to acceptable contaminant levels presented in this memorandum does not reflect Site-specific numeric guidelines or standards (i.e., preliminary remediation goals), which will be developed after the ERA is completed.

Page 3, First Full Paragraph.

The draft technical memorandum should be much clearer that the overarching goal of the process is the protection of human health and the environment. The CCT requests that the language in the paragraphs above be changed to the more conventional language found in EPA Guidance and in RAOs, to include the phrase "protection of human health and the environment."

3. References to Population-Level Risk Assessment.

As the last quotation illustrates, Teck Cominco is focusing on a population-level risk analysis. Teck Cominco's exclusive focus on populations is not correct. In a CERCLA action a risk assessment should be designed to

assess the risk to individuals of Threatened and Endangered and special status species. The CCT requests that the risk assessment include analysis of risk at the individual level for Threatened and Endangered and special status species. RAOs should also be developed to be protective at the individual level.

4. Inclusion of PRGs.

The quotation from Page 3, set forth above, discloses that Teck Cominco does not intend to develop PRGs. (See Page 3, First Full Paragraph quoted in Comment 2 above). The 1988 EPA Guidance instructs that PRGs are supposed to be a part of RAOs. The more recent Sediment Guidance promulgated in 2005 takes a more general approach. Both Guidances suggest that greater specificity in the RAOs, with the addition of PRGs, is helpful. PRGs are often numeric preliminary sediment screening levels like MCLs, sediment standards and typical screening benchmarks. The CCT requests that PRGs be developed.

5. RAOs Not Inclusive of All Pathways.

On page 2, Table 1 unduly limits the focus of the RI/FS and ERA. Teck Cominco has taken an exposure-pathway approach to RAOs, grouped by medium of exposure. However, the listed RAOs are not inclusive of all potential exposure pathways. For example, one of the sediment RAOs in Table 1 states: "Reduce to acceptable levels the risks to populations of birds and mammals that feed on aquatic resources." There is no inclusion of the sediment ingestion or direct contact pathway. Further, Table 1 should include RAOs on groundwater and the ecosystem. In the absence of a CSM, it is difficult or impossible to develop meaningful RAOs. Other general RAO concerns are as follows:

- Groundwater and porewater are not addressed at all. RAOs must be developed regarding contaminant transfer from groundwater to porewater, sediment and surface water;
- An ecosystem RAO should be added;
- Organism exposure pathways involving direct dermal contact or ingestion with the different media should be addressed;
- Amphibians and reptiles are not considered;
- Aerial transport of contaminated soils is not addressed; and
- Without further clarification or definition, the organisms implied by the phrase "non-nuisance" in the sediment-benthic infauna RAO is too non-specific and should be removed.

The CCT requests that the RAOs in Table 1 be broadened to create objectives inclusive of all potential exposure routes.

6. Premature Introduction of Considerations for Alternative Analysis.

On page 4, Teck Cominco states:

The current condition of the UCR ecosystem reflects the influence of multiple environmental stressors. In view of the multiple environmental stressors in the watershed, it is critical to consider the effects of the full range of chemical, physical and biological factors influencing the biota and habitats. These factors will be important to identifying and assessing effective remedial action alternatives.

This may be true, but this statement is not relevant to the development of RAOs. These considerations are relevant to the Feasibility Study remedial action alternative analysis, rather than identifying what should be the preliminary or even final RAOs. The CCT requests that this language be removed.

The CCT appreciates the opportunity to provide comments on this draft technical memorandum.

Sincerely,

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